



CRS 2005

Clinical Reporting System (BGP v. 5.0)

Sponsored by IHS, Office of Information
Technology (OIT)

Lori Butcher, CMI
Stephanie Klepacki, OIT

CRS

(Clinical Reporting System)

- Renamed this year from GPRA+
- RPMS software application for reporting GPRA and Area Director clinical performance data
 - IHS direct sites are required to use for reporting
- Can be used locally for specific public health performance initiatives

RPMS = Really Powerful at Measuring Stuff



Today's Agenda

- Clinical Performance Overview: Why Use CRS?
- CRS Overview and Hands-on Training
- Tips for Improvement





Clinical Performance Overview - Why Use CRS?



Measuring Quality of
Health Care for AI/AN

External Reporting: GPRA

- The Government Performance and Results Act (GPRA)
 - Is a Federal law requiring a data-supported audit trail from appropriated dollars to activities and ultimately to customer benefits or outcomes consistent with an agency's mission
 - Requires an annual performance plan, as well as an annual report



Annual Performance Plan

Must include:

- Performance goals or indicators for the fiscal year
- Description of resources needed to meet the goals
- Starting in FY05, projected fiscal cost of reaching indicator goal as total % of budget
- How data to be reported is verified and validated (subject to audit by OMB)
 - CRS for clinical indicators
 - Benchmarking to industry standards (HEDIS, Healthy People 2010, etc.)



Annual Performance Report

Must include:

- What was actually accomplished in comparison to goals in Plan
- If goals were not met, why not
- Plan for achieving unmet goals or reasons why goal is impractical or infeasible



The Role of GPRA Today

- The GPRA Annual Performance Report remains the most important set of annual measures
- The Director's performance contract with the Secretary is largely based on GPRA annual measures
- Area Directors' performance contracts with the IHS Director are largely based on GPRA annual measures
 - Service Unit Director/ CEOs performance assessment are increasingly based on GPRA annual measures



GPRA Indicator Categories

- Treatment: FY05 21 indicators
 - e.g., Diabetes, cancer prevention, oral health
- Prevention: FY05 12 indicators
 - e.g., immunizations, public health, tobacco control, obesity, etc.
- Capital Programming/Infrastructure: FY05 2 indicators
- Consultation, Partnerships, Core Functions and Advocacy: FY05 4 indicators



Indicator Categories for CRS

- Contains only GPRA *treatment* and *prevention* measures based on RPMS data – 21 indicators
- 15 additional clinical indicator topics for other key healthcare performance measures, of which:
 - 2 – GPRA FY06 (Childhood Obesity Reduction, Colorectal Cancer Screening)
 - 1 – GPRA Developmental (Depression/Anxiety Screening)
 - 1 – GPRA Background Measure (Diabetes Prevalence)
- 13 HEDIS indicators (some HEDIS-specific, e.g. Pap smear, uses different denominator def.)



**CRS has been designated as
the national reporting tool for
GPRA clinical indicators by
the IHS Director**



GPRO+ & National GPRO Reporting FY 2004



User Population Represented: over 1.1 million patients

Area	2004	2003	Area	2004	2003	Area	2004	2003
ABR	99%	94%	BIL	81%	87%	OKC	59%	61%
ALK	96%	61%	CAO	99%	96%	PHX	99%	99%
ABQ	100%	100%	NSH	95%	72%	POR	74%	37%
BEM	73%	68%	NAV	100%	99%	TUC	76%	76%



GPRRA FY04 Results

- Reported: 38 of 39 indicators
- Met: 27 of 39
- 11 missed (4 GPRRA+)
 - Retinopathy
 - Pap Smear
 - Fluoridation
 - Dental Access
 - Domestic Violence
 - Behavioral Health
 - Consumer satisfaction
 - Childhood IZs
 - HIV
 - Consultation process
 - CHS
- 1 pending results
 - Unintentional Injuries





CRS 2005



Overview and Hands-on Training



Background Info

What is CRS?

What Can CRS Do for You?

Indicators 101

Clinical Reporting System (CRS)

- RPMS software application that produces reports for GPRA and other clinical indicator measures based on RPMS data
 - based on software developed by Aberdeen Area in 2000
- Provides automated local and Area tracking of clinical performance on demand
- Intended to eliminate the need for manual chart audits for evaluating and reporting clinical indicators



CRS

- Identical logic ensures *comparable* performance data across all facilities
- Updated annually to reflect changes in the logic descriptions and to add new indicators
- Local facilities can choose to transmit data for National GPRA and HEDIS performance reporting to their Area
- Area Offices can produce aggregated Area performance reports



CRS Disclaimer

- Software is **not** a solution
- Software is only a *tool* to assist you (and your facility) in identifying and aggregating *comparable* clinical information
- Software can *help* you identify problems
 - with data
 - with clinical documentation process
 - with clinical care



How Can CRS Help?

- Allows passive, automated extraction of clinical indicators
- Shows your facility's performance against last year's national averages, on demand
- Identifies *specific* healthcare issues in a *specific* I/T/U population
 - single community
 - panel of patients
- Identifies clinical areas of concern or excellence



What is an Indicator Topic?

- **Indicator Topic**: an overarching clinical topic (e.g., pneumococcal immunization rates)
- Each topic has one or more:
 - Denominator: definition of the total population that is being reviewed
 - Numerator: the number of patients from the denominator who meet the criteria identified



Topic Example: Pneumococcal Immunizations

- Denominators
 - Active Clinical patients 65 and older
 - Active Diabetic patients
 - User Population patients 65 and older
- Numerators
 - Patients with Pneumovax ever, including refusals
 - Patients with documented refusals (REF) or not medically indicated (NMI)



What is an Indicator?

- An Indicator is one denominator and one numerator
- A GPRA Indicator is the indicator defined by the agency as a specific performance measure to be reported to Congress



Example: GPRA Performance Indicator Text

Maintain the FY 2004 rate for pneumococcal vaccination levels among non-institutionalized adult patients age 65 years and older.



Example: CRS GPRA Indicator

- CRS Denominator: Active Clinical patients 65 or older.
- CRS Numerator: Patients with Pneumococcal vaccine documented at any time before the end of the Report Period, including refusals in past year.



Key Denominator: Active Clinical Population

- Developed specifically for clinical indicators to identify more representative “active” population than User Pop
- For GPRA, defined as:
 - Must be Indian/ Alaska Native, based on Beneficiary classification 01, **and**
 - Must reside in a community specified in the site’s GPRA community taxonomy, **and**
 - Must be alive on last day of Report Period, **and**
 - Must have 2 visits to defined medical clinics in the past 3 years



How Does CRS Work?

- “Scavenger” hunt – looks in multiple RPMS packages for any related code
- Logic is based whenever possible on standard national codes
 - e.g., ICD-9, CPT, LOINC and national IHS standard codesets (Health Factors, patient education codes) in predefined taxonomies
- For non standard terminology, uses site-defined taxonomies populated by each facility with its own codes.
 - e.g., lab tests and medications



How is CRS Logic Developed?

- Indicator denominators and numerators are “translated” into programming code
 - by clinical subject matter experts
 - an English text expression was defined specifically in terms of what RPMS fields to look at and what values to look for to fit the definition.
 - programmer codes the software



Logic Example: Pneumovax

- Active Clinical patients ages 65 and older with Pneumovax documented ever.
 - **Immunization (CVX) codes:** 33 Pneumococcal Polysaccharide Vaccine; 100 Pneumococcal Conjugate Vaccine; 109 Pneumo NOS, *OR*
 - **POV:** V06.6; V03.89, V03.82, *OR*
 - **CPT:** 90669, 90732, *OR*
 - **V Procedure:** 99.55, *OR*
 - **Refusals in past year:** Immunization codes 33, 100, 109





Version 5.0

Current Status

Key Changes from v.3.1

Indicator Topics

Report Types

CRS 2005 v5.0: Current Status

- Beta testing completed Oct. 15, 2004
 - Cherokee (NSH)
 - Indian Health Care Resource Center (IHCRC) of Tulsa (OKC)
 - Albuquerque Service Unit (ABQ)
 - Feather River Tribal Health, Inc. (CAO)
 - Taos-Picuris Service Unit
- National release: **October 21, 2004**



CRS 2005 v5.0: Key Changes

- Replaced GPRA and Area Director Performance reports with National GPRA report
 - To be used for all GPRA reporting
 - Includes GPRA and key clinical indicators
 - Includes hard-coded report parameters
 - **Report Period:** July 1, 2004 – June 30, 2005
 - **Baseline Year:** 2000
 - **Population:** AI/AN Only
- Added patient lists for National GPRA indicators



Key Changes (cont'd)

- Revised Prenatal HIV and CVD: Cholesterol Screening to GPRA indicators
- Revised Diabetes: Nephropathy
 - GPRA numerator now requires positive urine/any microalbuminuria AND estimated GFR.
- Revised lab taxonomy to display only taxonomies used by CRS
- Reorganized report menus by including main and sub-menus



Key Changes (cont'd)

- 5 new indicators
 - Childhood Immunizations (GPRA)
 - **GPRA numerator:** 4:3:1:3:3 (4-DTaP, 3-OPV/IPV, 1-MMR, 3-Hib, 3 Hepatitis B)
 - Childhood Obesity Reduction
 - Chronic Kidney Disease Assessment
 - Comprehensive CVD-related Assessment
 - Diabetes Comprehensive Care

**Refer to User Manual Section 1.1
for Complete List of Changes**



Version 5.0 Patch

- Separate GPRA report
 - User selects all report parameters.
 - User selects any report end date or quarters.
 - Included in the Other National Reports menu option.
- National GPRA patient lists change
 - User now selects report period.



Version 5.0 Patch

- Diabetes Nephropathy – GPRA indicator not requiring GFR
- Added key for users to access run patient lists on all reports.
- Added key for users to edit site-defined taxonomies.
- Added key for system setup option.

Patch released January 31, 2005





Version 5.1

Current Status

Key Changes from v.5.0

CRS 2005 v5.1: Current Status

- Planned schedule
 - Begin logic definition: Sep 2004
 - Begin programming: Mid-Oct 2004
 - Begin beta testing: Early April 2005
 - National release: **May 2005**



CRS 2005 v5.1: Key Changes

- New CMS report
 - 10 quality measures for heart attack, heart failure, and pneumonia
- 6 new indicators (*also included in HEDIS report*):
 - Topical Fluoride (GPRA indicator)
 - 3 CVD-related
 - Osteoporosis Management in Women
 - Asthma Quality of Care
- New Elder Care report
- Optional GUI version of the software





**For more info, visit
our website:**

www.ihs.gov/CIO/crs



Demo

Discussion of Who Should Have
Access

Demo of System Setup



Standard Codesets and Taxonomies

What Are They?

How to Set Up and Manage

Common Problems

Standard Codes

- Identified for CRS in “pre-defined” taxonomies (e.g., hard-coded by programmer)
- **CPT**: to report diagnostic and therapeutic procedures for billing
- **ICD**:
 - Diagnoses (POV, Problem List)
 - Procedure codes
- **LOINC**: for laboratory tests, etc.
- IHS National **Patient Education** Codes
- IHS **Health Factors**



What is LOINC?

- Logical Observations, Identifiers, Names, and Codes
 - originally initiated for Laboratory values
 - now extended to include non-lab observations (e.g., vital signs, electrocardiograms)
- First IHS LOINC pilot project 2001
- **Prerequisite:** Lab patch 15
- For information about converting to LOINC, contact **Pat Beatty, OIT Lab Support** (patrick.beatty@mail.ihs.gov)



Health Factors

- Used by CRS
 - Alcohol (GPRA)
 - Tobacco (GPRA)
- Other Health Factors
 - Learning Preference
 - Readiness to Learn
 - Rubella Status
 - Staged Diabetes Management
 - TB Status



Patient Education Codes

- Required by JCAHO for accreditation
- Patient Ed codes “count” toward the following GPRA indicators
 - Alcohol Screening
 - IPV/DV Screening
 - Tobacco Use Assessment



Patient Ed (cont'd)

- Patient Ed codes “count” toward the following non-GPRA indicators
 - Prenatal HIV (Counseling or Education numerator, not GPRA testing numerator)
 - Depression/ Anxiety Screening
 - Tobacco Cessation
 - Medications Education (part of HQ Patient Safety initiative)
 - Nutrition and Exercise Education for At Risk Patients (contributes to new indicator Comprehensive CVD-related Assessment)



Patient Ed (cont'd)

- Documenting patient education
 - disease state, condition or system addressed
 - specific education topic
 - level of understanding
 - who provided (initials) and time spent
- DM – M – G – xyz – 10 min

www.ihs.gov/NonMedicalPrograms/HealthEd/
click on “National Patient Ed Initiative”



Example of Standard Codes in CRS Logic

- To define Pap Smear (past 3 years):
 - V Lab: Pap Smear (standard test name), *OR*
 - Site-defined taxonomy BGP GPRA PAP SMEAR, *OR*
 - LOINC taxonomy, *OR*
 - V POV: V76.2 Screen Mal Neop-Cervix, *OR*
 - V Procedure: 91.46, *OR*
 - V CPT: 88141-88167; 88174-88175, *OR*
 - Women's Health procedure Pap Smear, *OR*
 - Refusals in *past year*



Taxonomies

- Groupings of functionally related data elements
- Used by RPMS applications to find data items in PCC
 - Clinical Reporting System
 - Diabetes Management
 - Asthma Register System
 - HIV Management System (in development)
 - Cardiovascular Disease Management System (in development)
 - RPMS UDS Reporting (for tribal sites)



Taxonomies

- 2 Types of Taxonomies in CRS
 - Hard-coded
 - Users cannot update.
 - LOINC's are included in these.
 - Site-defined
 - Users update with System Setup menu option.
 - All non-LOINC lab tests are included in these.



Site-Defined Taxonomy Examples

TEST	VARIATIONS
DM AUDIT HGB A1C TAX All Hemoglobin A1C lab tests – used by Diabetes: Glycemic Control indicator topic	HgbA1C, A1C, HbA1c, Hemoglobin A1C, Glycosylated hemoglobin, Glycohemoglobin A1c
DM AUDIT MICROALBUMINURIA TAX All Microalbuminuria Lab Tests – used by Diabetes: Nephropathy Assessment indicator topic	Microalbuminuria Micral, Microalbuminuria, Urine A/C Ratio, AC Ratio, ACR, Microalbumin/ Creatinine Ratio, Microalbumin Random



Taxonomy Tips

- You must work with your Lab staff to identify all test names
 - would you know that Lipid panels at your site are named “Coronary Risk Panel”?
- Include ALL test names used by your facility since 1999, even if codes are currently inactive



Taxonomies (cont'd)

- Don't include names of lab panels in taxonomies for specific tests (e.g., "Lipid Panel" should NOT be included in LDL taxonomy)
- Think about converting to LOINC





Hands-on Session

Taxonomy Setup



Reports and Patient Lists

National GPRA

Selected Indicators

HEDIS Performance

National GPRA Report

- GPRA indicators and other key clinical indicators
- Includes Summary Page at end that compares local performance to previous national performance
- Select to export to Area
- Uses AI/AN population only (Beneficiary=01)
- User can run *separate option* for Patient Lists
- Recommended to be run *at least* quarterly



Selected Indicators Report

- All Indicator Topics with all denominators and all numerators
- Displays *both* Active Clinical and User Population denominators, in addition to any indicator-specific denominators
- Select *one* or *multiple* indicators *or* from *predefined* groups (e.g., Diabetes, Women's Health, etc)
- User can select population: AI/AN (Beneficiary 01), non AI/AN or both
- User can produce Patient Lists with report

HEDIS Report

- 13 HEDIS indicators
- May be run for sites seeking NCQA certification
- May be exported to Area for aggregation
- User can select population: AI/AN (Beneficiary 01), non AI/AN or both
- User can produce Patient Lists with report



Area Aggregate Reports

- For National GPRA and HEDIS Performance reports
- Aggregates any data files received from sites and produces Area summary report
- Individual uploaded data files must have matching **time periods** (date range, report year, AND baseline year) and **populations**





Report Format

(See Examples in
Training Notebook)

Patient Lists

■ Lists of Patients

- Random sample (10%)
- By designated provider
- All patients

■ National GPRO patient lists: User chooses to include:

- Patients meeting the indicator (included in numerator), or
- Patients not meeting the indicator, or
- Both



Patient Lists

- Selected Indicators and HEDIS patient lists: Depending on indicator, may include:
 - Patients meeting the indicator (included in numerator)
 - Patients not meeting the indicator
 - Both



Patient Lists Can Be Used For...

- Verifying RPMS data against patient's chart info
- Identifying patients who need certain screenings/procedures
 - e.g., tobacco screening, flu shot
- Identifying "at risk" patients
 - e.g., high LDL, high BP, obese
- Delimited files are most useful output for patient lists





Patient List Format (See Example in Training Notebook)

Using CRS Reports Locally

- Public health studies for one or multiple specific clinical topics
 - for entire service area
 - for one specific community
- Different provider specialties can track their own areas of interest
 - women's health, diabetes, etc.
- Individual provider can focus on own patients
 - Patient Lists by Provider
 - Run report on patient "panel"



Hands-on Session

National GPRA and Selected
Indicators Reports

National GPRA Patient Lists
Delimited Reports (Excel)



Report Results

Common Questions
National CRS Reporting Process
Example
Tips for Improvement

Common Questions

- Low BMI Rates
 - for children, height and weight not entered on same day
 - for adults, no height within past 5 years
- Low tobacco screening rates
 - **National** Health Factors not used
 - HF not entered into RPMS



Common Questions (cont'd)

- Low rates for Lipids, other lab tests
 - check taxonomies – talk to Lab staff
 - are your Lab tests sent out and not recorded in PCC?
 - Reference Lab interface coming



Process Example for National CRS Reporting

- IHS HQ identifies
 - Agency data due date
- CRS Data Coordinator (CAO) identifies to Area
 - Area data due date



CRS Reporting (cont'd)

- Area GPRA Coordinators identify to sites
 - Facility data due date
 - Export file transport mechanism
 - Additional Area-specific requirements
- Sites
 - Run a test report and review results
 - Run final report
 - Transmit export file



Questions???





Tips for Improvement



Data Quality

- Low or “incorrect” results on your CRS reports does not necessarily mean that you are not performing the appropriate procedures, screenings, etc
- It does mean that the data cannot be located in RPMS
- First, check what’s in the chart against what’s in RPMS
 - Use Patient Lists



Community Taxonomy

- Include all communities in your service area
- Most sites already have a defined Community taxonomy
- Your site or Area Planning Officer or Statistician should be able to assist in defining appropriate communities



Document Refusals

- Refusals count toward meeting many indicators
 - Pap, mammogram, immunization, diabetic eye exam, CRC screen, etc.
- Providers: document on PCC
 - Write in POV section “Refused ____”
(depending on test, IZ, or other procedure)
 - OR
 - Write “Refused” in appropriate Order Box at right
- Data Entry: use REF mnemonic



Document Historical Tests and Procedures

- **Providers:** ask about and record historical information on PCC
 - Ask patients about common off-site procedures (e.g., IZ type, date received, location)
 - Document telephone visits
 - Verbal or written lab or other referral reports
- **Data Entry:** use Historical Mnemonics
 - HIM (Immunization) HPAP (Pap Smear)
 - HRAD (Radiology) 76090-76092 for mammogram
 - HBE (Barium Enema) HCOL (Colonoscopy)
 - HFOB (FOBT, guiac) HSIG (Sigmoidoscopy)



Lab Codes

- Include all relevant lab codes for taxonomies
 - Lab updates lab profile and codes periodically through the year
 - Reports include not only current dates but also a baseline year (3 years prior)
 - Changed, inactive, deleted or new codes relevant to taxonomy need to be included to provide “correct and accurate” data output
 - Coordination with lab tech to assure ALL codes identified



Document Reference Lab Results

- If labs are sent out, ensure that test completion and result are entered in PCC when returned



Identify Problem Indicators NOW!

- Run National GPRA report every quarter
- Identify indicator results that look low or incorrect
- Run National GPRA Patient Lists for “problem” indicators
- Identify potential data or clinical process issues and resolve
- Re-run report

